Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1-8. Canceled

9. (Previously presented) A method for determining whether a compound of interest affects an adenylyl cyclase or phospholipase C pathway and therefore is an agonist of a receptor which couples to both Gs and Gq proteins comprising:

(a) providing a cell line which expresses urokinase-type plasminogen activator (u-PA);

(b) providing an expression vector comprising a nucleotide sequence encoding for a receptor which couples to both Gs and Gq proteins, said receptor not normally expressed in said cell line of step (a);

(c) introducing said expression vector into said cell line, thereby providing stably transfected cells;

(d) contacting said stably transfected cells of step (c) with said compound of interest; and

(e) determining whether said compound of interest affects an adenylyl cyclase or phospholipase C pathway and therefore is an agonist of a receptor which couples to both Gs and Gq proteins, wherein the u-PA activity, as measured by the fluorescence or absorbency spectroscopy values of the cell culture supernatant, of said stably transfected cells from step (d) is greater than the fluorescence or absorbency spectroscopy values of the cell culture supernatant of said cells from step (c).

10. (Currently amended) ~~The method of claim 9, wherein the method alternatively comprises:~~ A method for determining whether a compound of

interest affects an adenylyl cyclase or phospholipase C pathway and therefore is an agonist of a receptor which couples to both Gs and Gq proteins comprising:

(a) providing a cell line which expresses urokinase-type plasminogen activator (u-PA);

(b) providing an expression vector comprising a nucleotide sequence encoding for a receptor which couples to both Gs and Gq proteins, said receptor not normally expressed in said cell line of step (a);

(c) introducing said expression vector into said cell line, thereby providing stably transfected cells;

(d) contacting said stably transfected cells of step (c) with said compound of interest;

(e) ~~(d)~~ contacting ~~said stably transfected cells of step (c) and~~ said cell line of step (a) with said compound of interest; and

(f) ~~(e)~~ determining whether said compound of interest affects an adenylyl cyclase or phospholipase C pathway and therefore is an agonist of a receptor which couples to both Gs and Gq proteins, wherein the u-PA activity, as measured by the fluorescence or absorbency spectroscopy values of the cell culture supernatant, of said stably transfected cells from step (d) is greater than the fluorescence or absorbency spectroscopy values of the cell culture supernatant of said cell line of step (e) ~~(d)~~, which is not stably transfected with said receptor.

11. (Previously presented) A method for determining whether a compound of interest affects an adenylyl cyclase or phospholipase C pathway and therefore is an antagonist of a receptor which couples to both Gs and Gq proteins comprising:

(a) providing a cell line which expresses urokinase-type plasminogen activator (u-PA);

(b) providing an expression vector comprising a nucleotide sequence encoding for a receptor which couples to both Gs and Gq proteins, said receptor not normally expressed in said cell line of step (a);

(c) introducing said expression vector into said cell line, thereby providing stably transfected cells;

(d) contacting a first group of said stably transfected cells of step (c) with a known agonist of said receptor and then contacting said first group of stably transfected with said compound of interest;

(e) contacting a second group of said stably transfected cells of step (c) with a known agonist of said receptor; and

(f) determining whether said compound of interest affects an adenylyl cyclase or phospholipase C pathway and therefore is an antagonist of a receptor which couples to both Gs and Gq proteins, wherein the u-PA activity, as measured by the fluorescence or absorbency spectroscopy values of the cell culture supernatant, of said stably transfected cells from step (d) is less than the fluorescence or absorbency spectroscopy values of the cell culture supernatant of said stably transfected cells from step (e).

12. (Previously presented) The method of claim 9, wherein said Gs and Gq protein coupled receptor is human PTHR.

13. (Previously presented) The method of claim 10, wherein said Gs and Gq protein coupled receptor is human PTHR.

14. (Previously presented) The method of claim 11, wherein said Gs and Gq protein coupled receptor is human PTHR.

15. (Previously presented) The method of claim 9, wherein said cell line is LLC-PK1.

16. (Previously presented) The method of claim 10, wherein said cell line is LLC-PK1.

17. (Previously presented) The method of claim 11, wherein said cell line is LLC-PK1.

18. (Previously presented) The method of claim 15, wherein said Gs and Gq protein coupled receptor is human PTHR.

19. (Previously presented) The method of claim 16, wherein said Gs and Gq protein coupled receptor is human PTHR.

20. (Previously presented) The method of claim 17, wherein said Gs and Gq protein coupled receptor is human PTHR.

21. (Currently amended) A method for determining whether a compound of interest is an agonist of a receptor which couples to both Gs and Gq proteins thereby affecting an adenylyl cyclase or phospholipase C pathway comprising:

(a) providing a cell line which expresses urokinase-type plasminogen activator (u-PA) and a cell line which expresses u-PA and which has inhibited Gs signaling of u-PA activity;

(b) providing an expression vector comprising a nucleotide sequence

encoding for a receptor which couples to both Gs and Gq proteins, said receptor not normally expressed in said cell lines of step (a);

(c) introducing said expression vector into both ~~said~~ cell lines of step (a), thereby providing

stably transfected cells;

(d) contacting said stably transfected cells of step (c) with said compound of interest; and

(e) determining whether said compound of interest is an agonist of a receptor which couples to both Gs and Gq proteins thereby affecting an adenylyl cyclase or phospholipase C pathway, wherein the u-PA activity, as measured by the fluorescence or absorbency spectroscopy values of the cell culture supernatant, of said stably transfected cells from step (d) is greater than the fluorescence or absorbency spectroscopy values of the cell culture supernatant of said cells from step (c), which have not been in contact with said compound of interest.

22. (Currently amended) ~~The method of claim 21, wherein the method alternatively comprises:~~) A method for determining whether a compound of interest is an agonist of a receptor which couples to both Gs and Gq proteins thereby affecting an adenylyl cyclase or phospholipase C pathway comprising:

(a) providing a cell line which expresses urokinase-type plasminogen activator (u-PA) and a cell line which expresses u-PA and which has inhibited Gs signaling of u-PA activity;

(b) providing an expression vector comprising a nucleotide sequence encoding for a receptor which couples to both Gs and Gq proteins, said receptor not normally expressed in said cell lines of step (a);

(c) introducing said expression vector into both ~~said~~ cell lines of step

thereby providing stably transfected cells;

(d) contacting said stably transfected cells of step (c) with said compound of interest; and

(e) ~~(d)~~ contacting ~~said stably transfected cells of step (c) and said~~ both cell lines of step (a) with said compound of interest; and

(f) ~~(e)~~ determining whether said compound of interest is an agonist of a receptor which couples to both Gs and Gq proteins thereby affecting an adenylyl cyclase or phospholipase C pathway, wherein the u-PA activity, as measured by the fluorescence or absorbency spectroscopy values of the cell culture supernatant, of said stably transfected cells from step (d) is greater than the fluorescence or absorbency spectroscopy values of the cell culture supernatant of said cell lines of step (e) ~~(d)~~, which are ~~is~~ not stably transfected with said receptor.

23. (Currently amended) A method for determining whether a compound of interest is an antagonist of a receptor which couples to both Gs and Gq proteins thereby affecting an adenylyl cyclase or phospholipase C pathway comprising:

(a) providing a cell line which expresses urokinase-type plasminogen activator (u-PA) and a cell line which expresses u-PA and which has inhibited Gs signaling of u-PA activity;

(b) providing an expression vector comprising a nucleotide sequence encoding for a receptor which couples to both Gs and Gq proteins, said receptor not normally expressed in said cell lines of step (a);

(c) introducing said expression vector into ~~said~~ both cell lines of step (a), thereby providing stably transfected cells;

(d) contacting a first group of said stably transfected cells of step (c) with

a known agonist of said receptor and then contacting said first group of stably transfected with said compound of interest;

(e) contacting a second group of said stably transfected cells of step (c) with a known agonist of said receptor; and

(f) determining whether said compound of interest is an antagonist of a receptor which couples to both Gs and Gq proteins thereby affecting an adenylyl cyclase or phospholipase C pathway, wherein the u-PA activity, as measured by the fluorescence or absorbency spectroscopy values of the cell culture supernatant, of said stably transfected cells from step (d) is less than the fluorescence or absorbency spectroscopy values of the cell culture supernatant of said stably transfected cells from step (e).